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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,368	04/05/2007	Lorna M. Kessell	118989-06060514	2819
20583	7590	01/28/2010	EXAMINER	
JONES DAY 222 EAST 41ST ST NEW YORK, NY 10017			ARNOLD, ERNST V	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,368	Applicant(s) KESSELL ET AL.	
	Examiner ERNST V. ARNOLD	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/9/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's election without traverse of Group I, claims 1-9 and 11 in the reply filed on 1/5/10 is acknowledged. Claim 10 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected subject matter, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 1/5/10.

Claim 12 has been cancelled.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed 6/9/06 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the reference of Kessell US 2002/005499 does not exist. The Examiner found this in the database:



US 2002/005499 A1

(19) **United States**

(12) **Patent Application Publication**
Kohda

(10) **Pub. No.: US 2002/0005499 A1**
(43) **Pub. Date: Jan. 17, 2002**

(54) **METHOD OF AND APPARATUS FOR
OBTAINING RADIATION IMAGE**

(57) **ABSTRACT**

(76) **Inventor: Katsuhiko Kohda, Kaisei-machi (JP)**

A radiation image conversion panel has a stimuable phos-
phor layer which is excited into a luminescence of ultra-violet light.

But the cited reference number was not found and accordingly a line has been drawn through it on the IDS. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites: "(number average)". It is unclear if the "number average" in parenthesis is supposed to further limit the claim or not. Correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 4 recites the broad recitation "greater than 30%, and the claim also recites "greater than 40%" and "greater than 50%" which are the narrower statements of the range/limitation. Correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 states that the polysiloxane comprises 0.8 to 2.5

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carboxyl groups per molecule. But claim 1 limits the polysiloxane to 0.1 to 3 carboxyl groups. Correction and clarification is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 recites: "wherein the carboxyl group is attached laterally, preferably only laterally..." If the carboxyl group is attached laterally then it can only be attached laterally and the "preferably only laterally" is redundant. But preferably laterally infers some other attachment is possible and that would contradict the fact that the carboxyl group is attached laterally. Therefore, it is unclear what is intended by Applicant. Correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gormely et al. (US 6124490).

Applicant claims:



1. (Original) A dispersion comprising particles of metal oxide dispersed in a siloxane fluid and a dispersing agent which is a polysiloxane wherein (i) the polysiloxane comprises in the range from 0.1 to 3 carboxyl groups, and (ii) the ratio of non-carboxyl group containing monomer units to carboxyl group containing monomer units in the polysiloxane is in the range from 40 to 150:1.

Determination of the scope and content of the prior art

(MPEP 2141.01)

Gormely et al. teaches cross-linked polysiloxane cosmetic compositions that can be sunscreens comprising a low molecular weight silicone oil and the cross-linked polysiloxane (Abstract; column 2, lines 8-62; Example 32; and claims 5-16). The sun care formulations can also contain inorganic sun filters such as TiO₂ or ZnO as well as

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other sun filters which when added would create a dispersion (column 22, line 66 through column 23, line 6).

Example 32 is:

EXAMPLE 32

Sunscreen

In Table 7, below, is an example of a W/O emulsion containing sunscreen and the product of example 7, compared to a control sample.

TABLE 7

	Control % by weight	Example 32 % by weight
<u>Phase I</u>		
Deionized water	81.8	81.8
magnesium sulfate	0.7	0.7
<u>Phase II</u>		
Cyclomethicone D5	10.0	2
Span 85	1	1
Example 7 (25% polymer)	0	8
Arlacel P135	0.5	0.5
Ethyl hexyl	3	3
p methoxycinnamate		
Octyl stearate	3	3

Example 7 is:

EXAMPLE 7

Zwitterionic Polymer

Witco Silsoft® A-887 is a fairly low molecular weight pendant diamino capped polysiloxane with an equivalent weight of 3624 g/mol. 120.7 gms Silsoft A-887 was added to 375 gms DC-245 and reacted with one equivalent quantities or 4.3 gms. of itaconic acid for 2 hours at 125° C. and

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had a viscosity of 450 cP upon cooling. The reaction product has a 25% solids content and an alkali number of 4.2 and an acid value of 4.0.

The carboxyl groups are attached laterally in the absence of evidence to the contrary.

Cyclomethicone is solvent. Linear and cyclic volatile methyl siloxanes such as polydimethylsiloxane are taught (column 19, lines 23-67 and column 11, lines 1-46). A 1:1 ratio of the primary amine and itaconic acid is taught (column 12, lines 57-62).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

1. The difference between the instant application and Gormely et al. is that Gormely et al. do not expressly teach particles of a metal oxide dispersed in a siloxane fluid and a dispersing agent which is a polysiloxane with the number of carboxyl groups per molecule or per monomer and ratio of instant claim 1 or the number of non-carboxyl group containing monomer units.

2. The difference between the instant application and Gormely et al. is that Gormely et al. do not expressly teach a viscosity in the range from 0.2 to 10 Pa.s.; or the polysiloxane has a molecular weight in the range from 4000 to 15000 or that the dispersion comprises greater than 30% by weight of particles of metal oxide.

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

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1. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to make the composition of Gormely et al. with particles of a metal oxide dispersed in a siloxane fluid and a dispersing agent which is a polysiloxane with the number of carboxyl groups per molecule or per monomer and ratio of instant claim 1 or the number of non-carboxyl group containing monomer units and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because Gormely et al. suggest adding TiO_2 and ZnO to the sunscreen composition and the dispersing agent polysiloxane is made in the same way that Applicant teaches is acceptable (page 5, lines 9-12 of the instant specification teaches treating polysiloxanes with a primary amine group with itaconic acid) and would intrinsically has the same properties and number of carboxyl and non-carboxyl groups as instantly claimed. The metal oxide particles are intrinsically hydrophobic in the dispersion. Please note that the U.S. Patent Office is not equipped with analytical instruments to test prior art compositions for the infinite number of ways that a subsequent applicant may present previously unmeasured characteristics such as the ratio of non-carboxyl group containing monomer units to carboxyl group containing monomer units.

2. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to make the composition of Gormely et al. with a viscosity in the range from 0.2 to 10 Pa.s.; or the polysiloxane has a molecular weight in the range from 4000 to 15000 or that the dispersion comprises greater than 30% by weight of particles of metal oxide and produce the instant invention.

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One of ordinary skill in the art would have been motivated to do this because Gormely et al. teach adjusting the viscosity to obtain a wide viscosity range (column 5, lines 5-31) and teach a viscosity of 450 cP for the siloxane used in Example 32 which would decrease upon making the emulsion. The U.S. Patent Office is not equipped with analytical instruments to test prior art compositions for the infinite number of ways that a subsequent applicant may present previously unmeasured characteristics such as the viscosity of the final sunscreen composition. Gormely et al. teach that the siloxane has a MW of 3624 g/mol in example 7 above which is just below Applicant's claimed range of 4000 to 15000. First of all, MPEP 2144.05: "Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)." Second of all, Gormely et al. is not limited to that single siloxane polymer and it is merely routine optimization to produce a polysiloxane of higher molecular weight, such as 10000 or higher (column 8, lines 60-67) in the absence of evidence to the contrary (see column 5, line 33 through column 8, line 67). With regarding the relative amount of metal oxide dispersed in the composition recited in Applicants' dependent claims; the amount of a specific ingredient in a composition is clearly a result effective parameter that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ. It would have been customary for an artisan of ordinary skill to determine the optimal amount of each ingredient

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needed to achieve the desired results. Thus, absent some demonstration of unexpected results from the claimed parameters, the optimization of ingredient amounts would have been obvious at the time of applicant's invention. The expected result is yet another sunscreen composition.

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernst V. Arnold whose telephone number is 571-272-8509. The examiner can normally be reached on M-F (7:15 am-4:45 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ernst V Arnold/
Primary Examiner, Art Unit 1616

10 Poise = 1 Pascal second [Pa s]

1 centiPoise cp = 1 mPa s